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EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,828

Applicant(s)

HAVENS, STEVEN W.

Examiner

Michael P. Nghiem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 27-36 and 38-41 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-46 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-14, 18-21, 26, 37 and 42 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 15-17, 22-25 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The Amendment filed on November 3, 2005 has been acknowledged.

Claim Objections

Claim 42 is objected to because of the following informalities:

- "comprise" (line 4) should be -- comprises --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 7-14, 18-21, 26, 37, and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewis et al. (US 6,455,319).

Regarding claims 1 and 42, Lewis et al. discloses a method (Fig. 1) for correlating raw transducer data in a system of transducers (array of sensors 110) comprising the steps of:

- communicating transducer data in a common format (measuring response from sensors, Abstract, lines 7-8);
- characterizing the transducer data and relationships between transducers in a common format (Abstract, lines 8-10);
- defining interdependencies of transducers (column 3, line 65 – column 4, line 3) for modeling a system (column 3, lines 63-65);
- time correlating the data from the various transducers (column 2, lines 63-66).

Regarding claim 2, Lewis et al. discloses the step of communicating the transducer in a common format (column 2, lines 58-63).

Regarding claim 3, Lewis et al. discloses that the transducer data produces measurements of physical parameters (detection of an analyte from sensors, column 3, lines 43-44).

Regarding claim 4, Lewis et al. discloses measurements comprise samples of one or more physical parameters (responses from sensors, column 3, line 44).

Regarding claim 7, Lewis et al. discloses that the data is communicated in clusters (Fig. 1).

Regarding claim 8, Lewis et al. discloses that the clusters have time tags (column 2, lines 63-66).

Regarding claim 9, Lewis et al. discloses that the time tag is representative of the state of a system clock at the time of the first sample of the cluster (time tagging data).

Regarding claim 10, Lewis et al. discloses that the data is communicated in a transducer markup language (sensor response).

Regarding claim 11, Lewis et al. discloses that the transducer data is communicated without loss of fidelity (loss of fidelity is not mentioned in reference).

Regarding claim 12, Lewis et al. discloses that the basis of the common format is a transducer characteristic frame (Fig. 1).

Regarding claim 13, Lewis et al. discloses that the transducer characteristic frame has a dimension of at least 0, 1, 2, 3, or greater (dimension of array, Fig. 1).

Regarding claim 14, Lewis et al. discloses that the common characterization expresses spatial, or temporal, or other relations between samples using a common transducer characteristic frame (Abstract, line 9).

Regarding claim 18, Lewis et al. discloses using a transducer to model time varying properties of another transducer (column 2, lines 60-63).

Regarding claim 19, Lewis et al. discloses that the step of specifying interdependencies between transducers as at least one of attached; dangling; position; and attitude; and derivatives thereof (spatio profile, column 2, line 60-61).

Regarding claim 20, Lewis et al. discloses that the step of adding any number of additional transducers to the system and following the previously recited steps (include second sensor to first sensor, column 2, line 63).

Regarding claim 21, Lewis et al. discloses calculating a specific time tag using a temporal transducer characteristic frame model (column 2, lines 63-66).

Regarding claim 26, Lewis et al. discloses storing the correlated transducer data for retrieval and processing at a time after correlation (via 180, Fig. 1).

Regarding claim 37, Lewis et al. discloses display means for displaying selectable portions of the transducer data (Fig. 4's).

Regarding claim 42, even though Lewis et al. does not disclose the recitation of "the transducer data produces measurements of physical parameters in the form of samples

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thereof, and where the samples each comprises a transducer characteristic frame", the recitation has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Allowable Subject Matter

Claims 5, 6, 15-17, 22-25, and 43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 44-46 are allowed.

Reasons For Allowance

The **combination** as claimed wherein one or more samples comprise a transducer characteristic frames (claims 5, 43) or N spatial coordinates of each sample are expressed in a transducer characteristic frame (claims 15, 44) or expressing arbitrary properties and

characteristics of transducers in a transducer characteristic frame (claims 17, 46) or calculating transducer time varying properties by interpolating values from other transducers using the specific time tag (claims 22, 45) or calculating external orientation of any transducer sample to a specified external reference system (claim 23) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

Applicant's arguments filed on November 3, 2005 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejections, Applicants argue that, regarding claim 1, the specific correlation of a system of transducers, communication transducer data, defining interdependencies among transducers and time correlating the data from various transducers is not specifically addressed by Lewis.

Examiner's position is that Lewis discloses as discussed above:

"a method (Fig. 1) for correlating raw transducer data in a system of transducers (array of sensors 110) comprising the steps of:

- communicating transducer data in a common format (measuring response from sensors, Abstract, lines 7-8);
- characterizing the transducer data and relationships between transducers in a

common format (Abstract, lines 8-10);

- defining interdependencies of transducers (column 3, line 65 – column 4, line 3) for modeling a system (column 3, lines 63-65);
- time correlating the data from the various transducers (column 2, lines 63-66). “

Regarding claim 2, Applicants further argue that Lewis does not discuss communicating transducer data.

Examiner's position is that Lewis discusses communicating transducer data (sensors responses, column 2, lines 62-63).

Regarding claim 3, Applicants further argue that Lewis does not address the actual collection of the data, its format, its transmission or the format of data.

Examiner's position is that Applicants arguments are not found in claim 3. However, as discussed in claim 1, Lewis discloses communicating transducer data in a common format (measuring a response from sensors, Abstract, lines 7-8) and characterizing the transducer data and relationships between transducers in a common format (Abstract, lines 8-10).

Regarding claim 4, Applicants further argue that Lewis does not address the actual format of the data, using a common format or any technique of formatting the data nor to facilitate common processing of that data upon transmission and receipt.

Examiner's position is that Applicants arguments are not found in claim 4. However, as discussed in claim 1, Lewis discloses communicating transducer data in a common format (measuring a response from sensors, Abstract, lines 7-8) and characterizing the transducer data and relationships between transducers in a common format (Abstract, lines 8-10).

Regarding claim 7, Applicants further argue that Lewis does not address the logical grouping of data, which is a definition of TML data cluster.

Examiner's position is that neither the logical grouping of data nor TML data cluster is recited in the claim. However, Lewis et al. discloses that the data is communicated in clusters (array of sensors, Fig. 1).

Regarding claim 8, Applicants further argue Lewis does not discuss how data is captured, stored, transmitted or received.

Examiner's position is that claim 8 does not recite how data is captured, stored, transmitted or received.

Regarding claim 9, Applicants further argue that Lewis does not discuss the use of time tag, nor its correlation to other time tags within a system, nor its accuracy.

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Examiner's position is that Lewis discloses that the time tag is representative of the state of a system clock at the time of the first sample of the cluster (feature of time tagging data).

Regarding claim 10, Applicants further argue that Lewis does not address the format of the data.

Examiner's position is that Lewis discloses that the data is communicated in a transducer markup language (sensor response is deemed to be transmitted in a transducer format, noting that the transducer markup language is not defined).

Regarding claim 11, Applicants further argue Lewis does not address the fidelity of data, its preservation or its transport.

Examiner's position is that Applicants arguments are not found in the claim. However, Lewis discloses that the transducer data is communicated without loss of fidelity (loss of fidelity is not mentioned in reference).

Regarding claims 12-14 and 26, Applicants further argue that Lewis does not address the format of data.

Examiner's position has been addressed in the above rejections.

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Regarding claims 18-20, Applicants further argue that Lewis does not address how the sensor responses would be modeled, captured, characterized, transmitted, or analyzed.

Examiner's position has been addressed in the above rejections.

Regarding claim 21, Applicants further argue Lewis does not address calculating specific time tags.

Examiner's position is that Lewis discloses calculating specific time tags (time information, column 2, lines 63-66, are deemed to be specific calculated time information).

Regarding claim 37, Applicants further argue that Lewis does not address the capture, characterization, transmission, or display of data.

Examiner's position is that Lewis discloses display means for displaying selectable portions of the transducer data (Fig. 4's).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

January 2, 2006